System Release Bulletin

Number : 86 A2 82EJ **Version : 03**

TRADEMARKS

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Table of Contents

1. General Information

The SRB provides release-specific information and instructions related to software installation and configuration.

For bullion systems two items need to be known:

- How to change the boot order
- How to configure the LSI adapter for RAID purpose.

1.1 PASSWORDS to access the bullion services

To log into the VMWARE console: user = root ; password = bullion

To log into the hardware console: user = super ; password = pass

1.2 Boot Order

1.2.1 Boot Maintenance Manager

From the BIOS main interface, access to the Boot Maintenance Manager:

- First, the boot order must be set for each kind of Legacy Device
- Then, the system boot order can be set.

1.2.2 Boot Order for Legacy Devices

From "**Boot Maintenance Manager**" menu, set the boot order for each kind of Legacy Device:

- Floppy drives (not available on novascale bullion)
- Hard-disks drives
- CD-ROM drives (not available on novascale bullion)
- NET drives
- BEV drives (network/PXE)

1.2.3 Example: Hard-Disks drives

In this example, we can choose between:

- RAID volume provided by the LSI MegaRAID adapter controller.
- 4GBytes USB stick

1.2.4 Example: CD-ROM drives

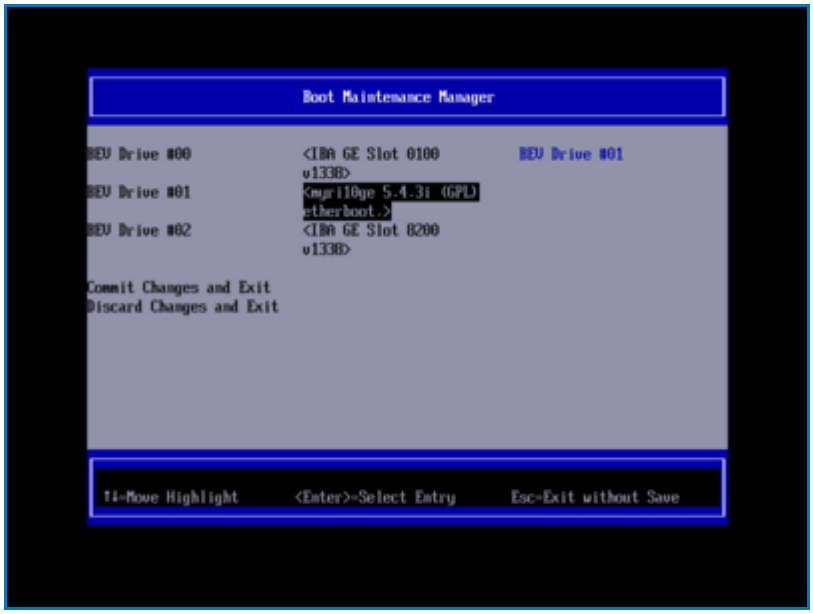
In this example, we can choose between:

- External USB CDROM
- Raritan emulated CDROM devices (BMC)

1.2.5 Example: BEV drives

In this example, we can choose between:

- PXE from on-board Intel ethernet (*Kawela*)
- Another add-on board



1.3 Change Boot Order

Then, from the "**Boot Maintenance Manager**", select the "**Change Order**" item.

From the interface, the boot order can be set using a list with:

- EFI devices
- only the selected item for each kind of legacy device

In the boot order list, there is no way to have two devices from the same kind of legacy.

2. The Boot Manager

From the BIOS main interface, we can select the **Boot Manager** item.

From the "**Boot Manager**" interface, we are able to boot on the selected device. This may be useful for maintenance.

Up to 8 devices are listed in the "**Boot Manager**" interface. These are the devices available from the "**Boot Maintenance Manager**" boot order list:

- EFI devices
- Only the selected item for each kind of legacy device

3. Restrictions, Known Problems and Workarounds

- EMM 11.07.11 is mandatory **before** using BIOS 1.8.3 (documented in EMM Release Note)

- The virtual media is not reliable and may not work or generate IO errors when used. If this occurs, use the internal DVD Player if any, or an external USB DVD Player connected to one of the system USB slot.

- In the vCentervSphere client application, Information about the bullion server is low : for example, fan speed, temperature cannot be displayed. A future version of vCenter from VMware will correct this problem.

4. LSI Megaraid 9261-8i SAS controller configuration

4.1 Downloading the LSI Megaraid MegaCli tool

In order to configure your LSI Megaraid SAS 9261-8i SAS controller, you must dowload the latest MegaCli tool from the LSI support web site ; this tool is downloadable from : http://www.lsi.com/storage_home/products_home/internal_raid/megaraid_sas/value_line/megaraid_sas_9261-8i/index.html

At this step, clic on the "support and downloads" tab, scroll the window until "miscellaneous" and clic on the MegaCli-VMWARE item. Accept the license agreement and start the download.

4.1.1 What do I need to configure the LSI Megaraid SAS controller

There are two ways to manage the LSI adapter's configuration:

– Using the WEB based interface in the BIOS (WEBBIOS through CTRL-H)

– Using the Command Line Interface (CLI through CTRL-Y in the BIOS).

The normal way to create a RAID managed system is to use the WEBBIOS Interface (CTRL-H). Just follow the configuration wizard to adjust your configuration to your needs.

If you want to manage the RAID from your running system, you first need to install MegaCli (downloaded from LSI Web site, see section 4.1) on your running system .

Then you can manage your RAID configuration using the MegaCli command line (see section 4.3)

4.2 Configuring the LSI Megaraid SAS controller using WEBBIOS

The simplest way to configure Raid Groups is using the WEBBIOS utility.

To enter in the WEBBIOS utility, proceed as follow:

- At the start of the novascale bullion server, press [Ctrl]+[H] when this message is displayed.
- Press the [Space] key when the message "Hit [Space] for Boot Menu" is displayed.
- In the BIOS interface, go to "Boot Maintenance Manager" then [Enter],
  on "Boot Options", press [Enter],
  go down to "Set Legacy BEV Drive Order" and press [Enter]

  On the line "BEV Drive #0", press [Enter] to modify,
  then select "<LEGACY PCI DEVICE>" and validate by [Enter].

  Save the changes by selecting the line "Commit Changes and Exit"
  and press [Enter].

  Press [Esc] to go back to the main menu.

  Go down to "Boot Manager" and press [Enter],

  Select the line "LEGACY PCI DEVICE", press [Enter] to display the interface of the WEBBIOS utility allowing to configure the LSI MegaRaid SAS adapter.

NOTE: It is recommended to configure the mouse in "Single cursor mode ", inside the Remote Console window.

4.3 MegaCli (command line interface)

From the MegaCli package dowloaded from the LSI web site, unzip the MegaCli command and type MegaCli -h to view all possible options with the help menu.

5. Upgrading or reinstalling VMware ESXi 4 or later

This section describes how to upgrade or install VMware ESXi 4 or later on the USB storage device embedded in Bull novascale bullion

5.1 Introduction

Bull novascale bullion is preloaded with Vmware ESXi 4

Bull novascale bullion is delivered with an embedded USB storage device preloaded with Vmware ESXi 4.

The following information needs to be executed only when upgrading an already installed Vmware.version

This section describes the installation of *VMware ESXi 4* on Bull novascale bullion server embedded USB storage. This embedded USB storage device has been certified with *VMware ESXi 4* to ensure proper operation of the server.

The installation process requires familiarity with administration of bullion server, and its *Server Hardware Console* and remote console.

As *VMware ESXi 4* is going to be installed, *VMware ESXi 4* installation ISO image file is also required. Download it from VMware website if necessary, and burn it onto a CD-ROM.

5.2 Installation Process

Phase 1: Installing *VMware ESXi 4* on USB storage device

Phase 2: Setting up the server to boot on USB device

Phase 3: Configuring *VMware ESXi 4*

5.3 Installing *VMware ESXi 4* on USB storage device

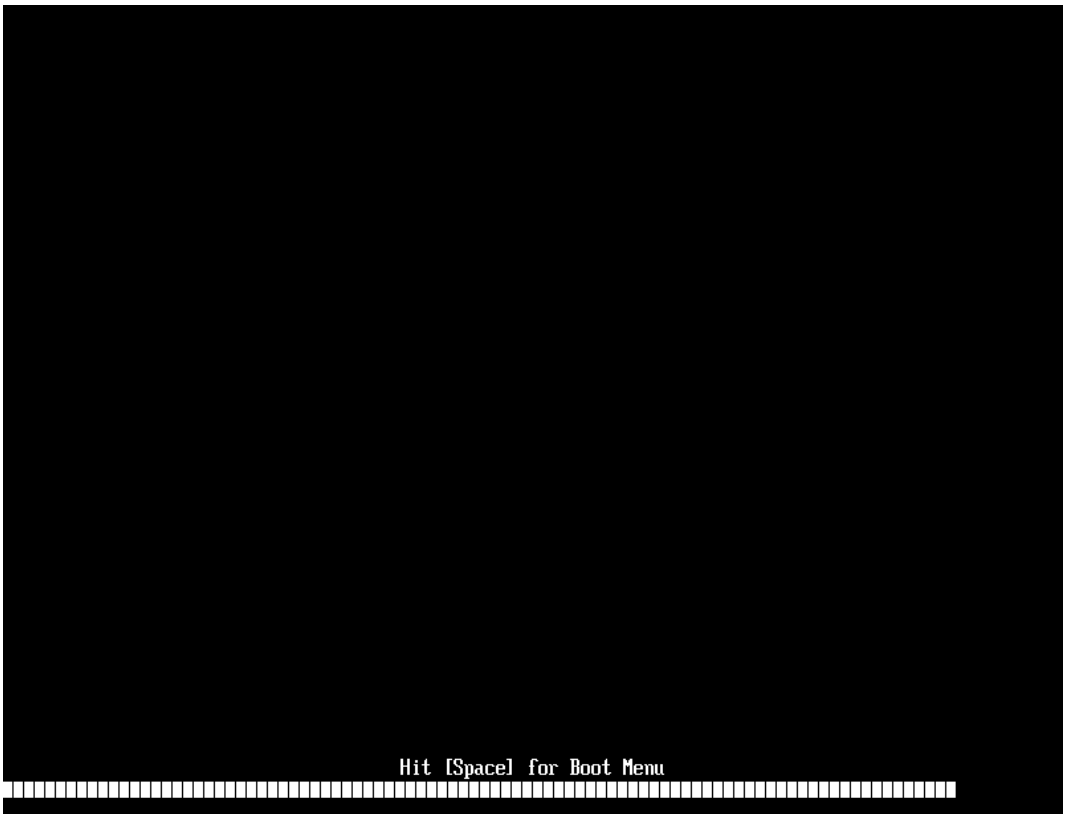
This section covers the following tasks:

- Boot the server using the CDROM Drive
- Install ESXi

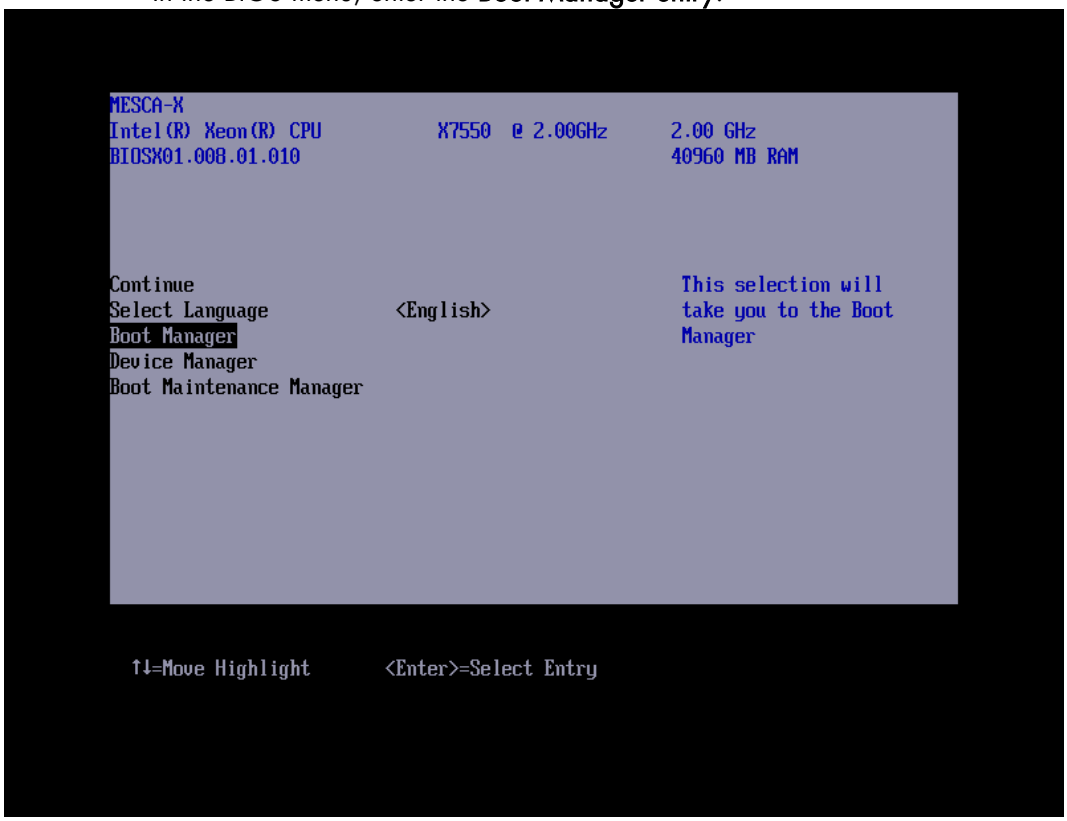
5.3.1 Boot the server using a CDROM Drive

It is now possible to boot the server with a CDROM drive (external or internal) containing a CD-R burned with the *VMware ESXi* ISO file.

- Power on the machine using the Power Management menu in the *Server Hardware Console*.
- In the remote console window, enter the BIOS by hitting **Space** on the keyboard when this message is displayed:



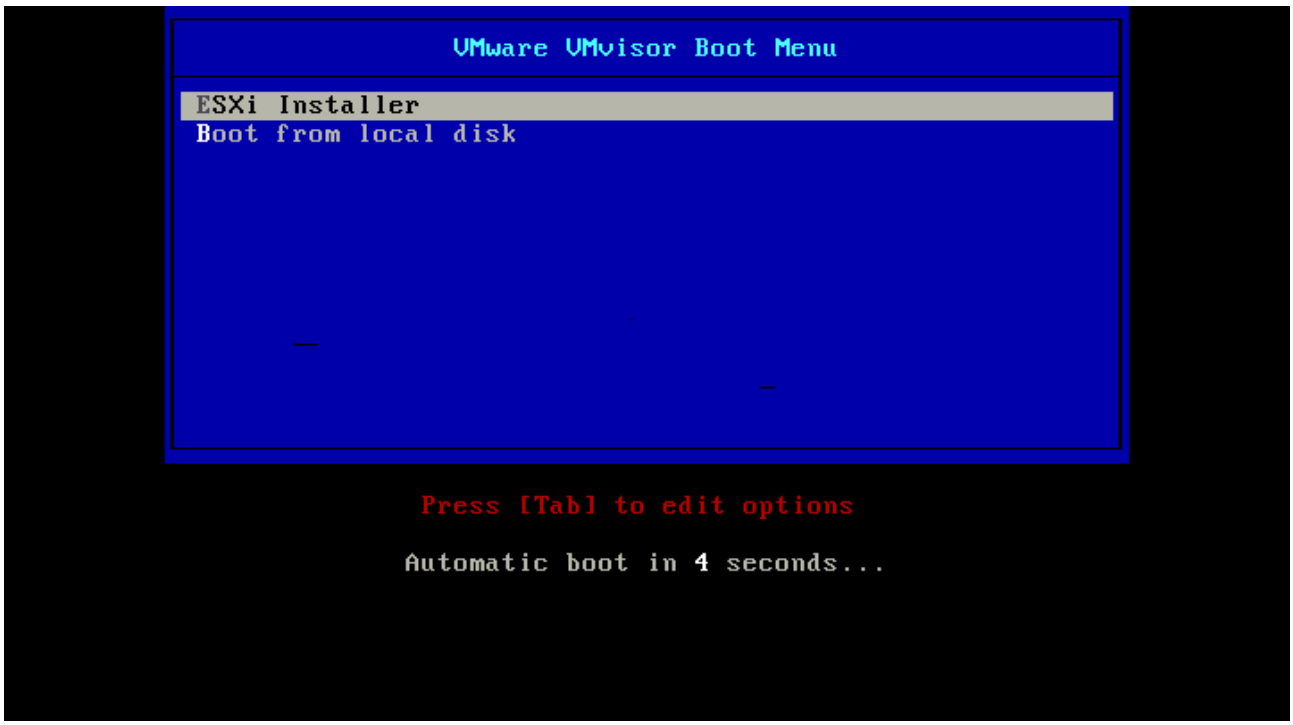
- In the BIOS menu, enter the **Boot Manager entry**:



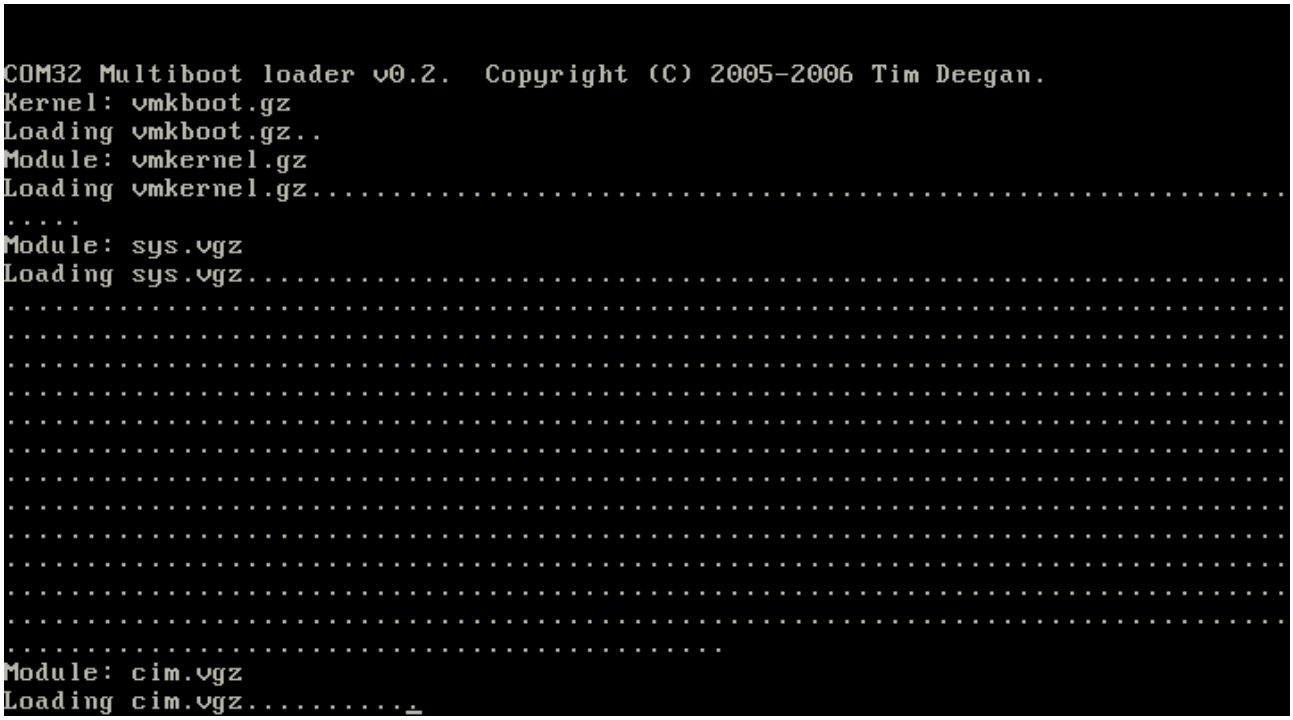
- The Boot Manager screen displays configured devices which may be used to boot the server. Select the entry corresponding to your CDROM drive to boot the *VMware ESXi 4* ISO file:

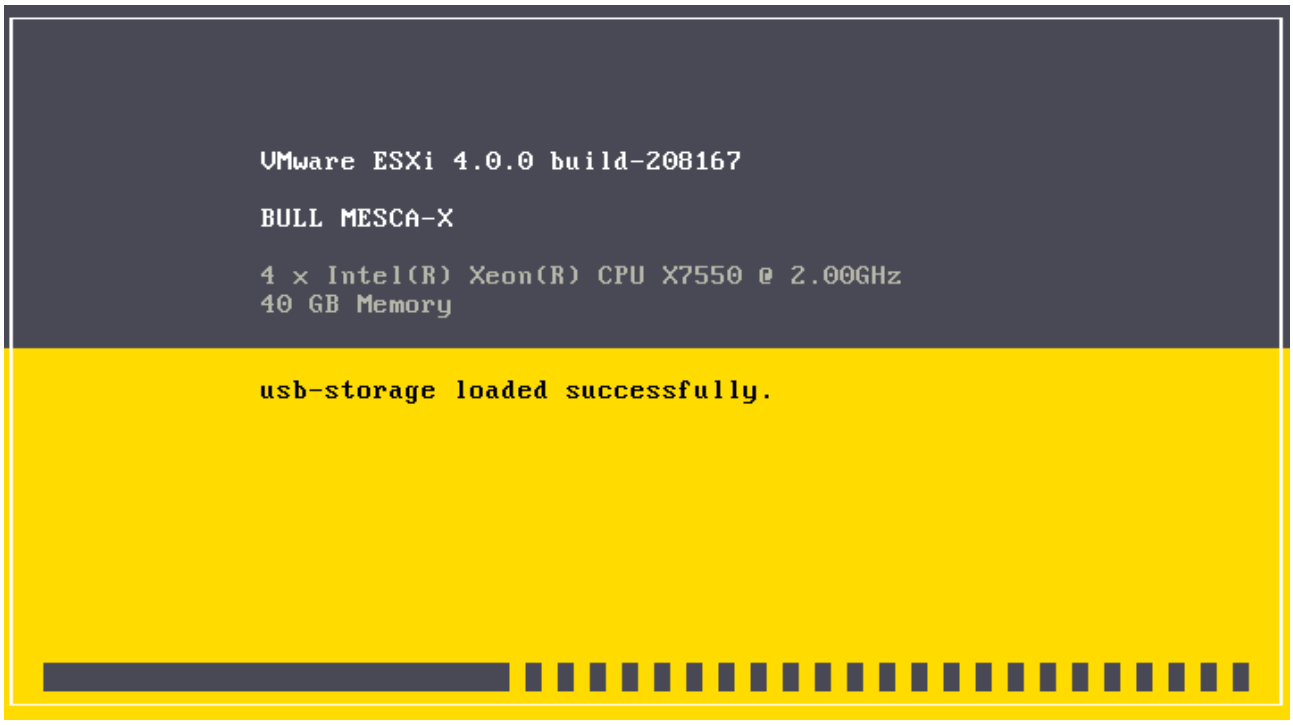
5.3.2 Install ESXi

- The first *VMware ESXi* screen is displayed, let the countdown expires to boot the **ESXi installer**:

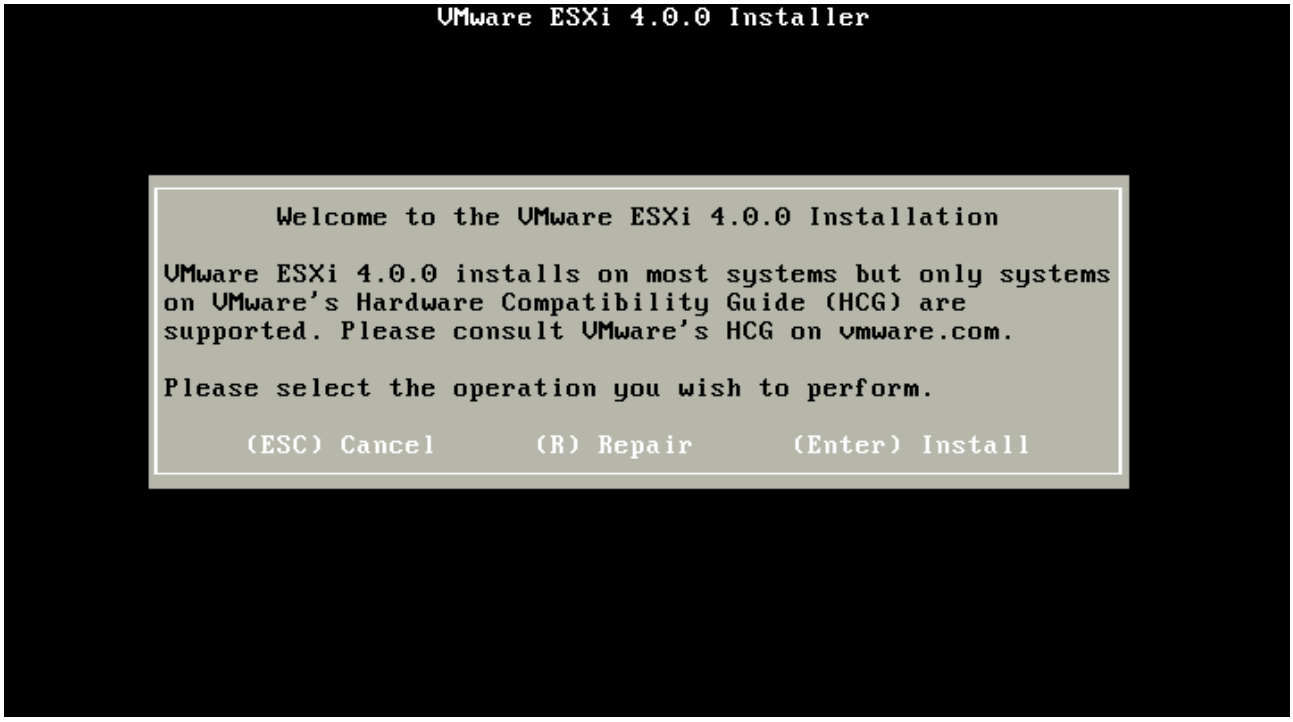


- *VMware ESXi* installer is now booting on the server, stepping through various screens. The boot process may take up to ten minutes, depending of your network speed between the machine executing the remote console and the **novascale bullion**:

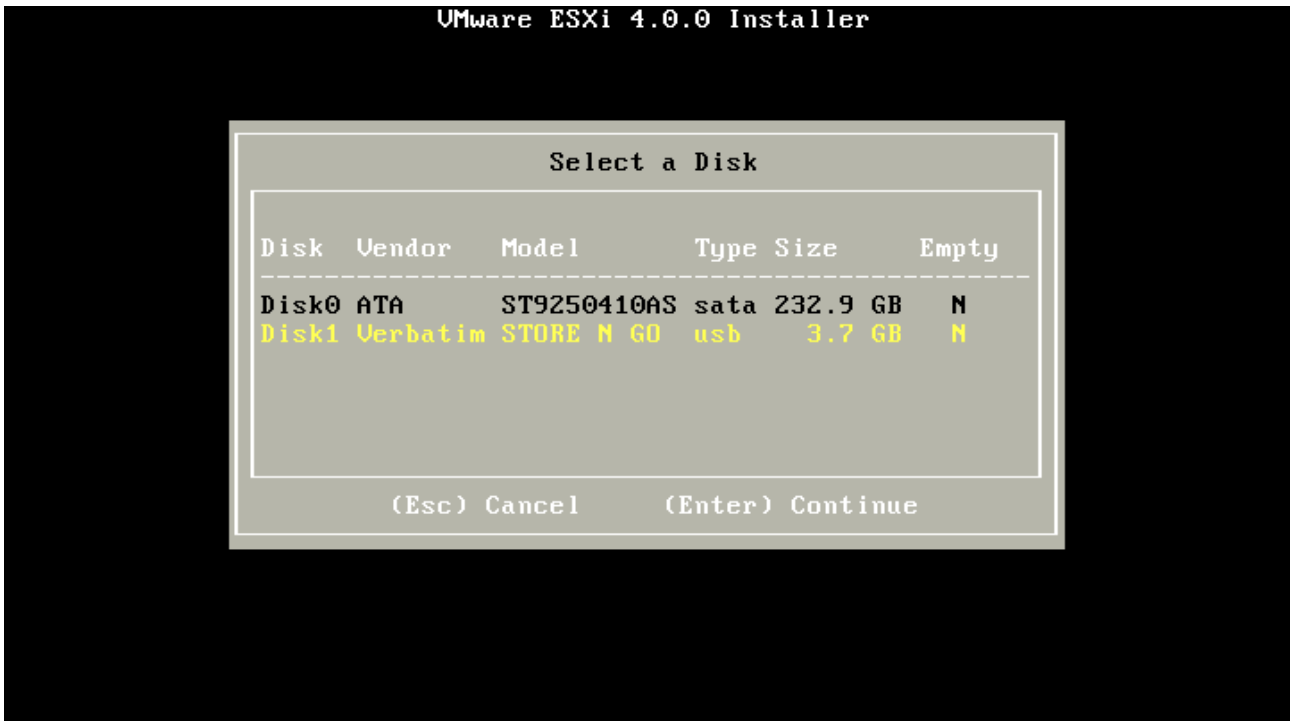




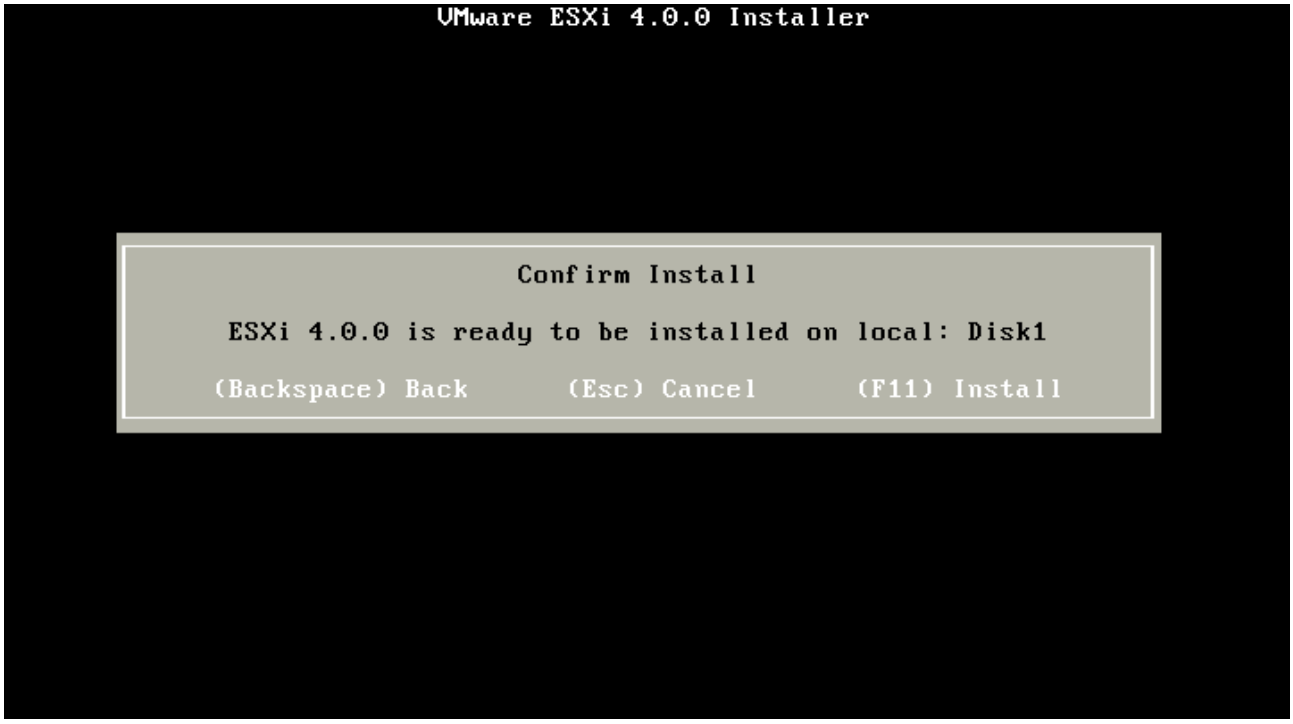
- Once the boot process is complete, the *VMware ESXi* installer welcomes you. Hit **Enter** to start the installation process, then press **F11** to accept the End User license Agreement and continue the installation:



- After EULA has been accepted, the *VMware ESXi* installer prompts you to select a destination disk for the installation.
  Several entries may be available, depending of your storage configuration (local disks, SAN, USB storage...)
  Select the item which is listed as being of **USB** type.
  In the screenshot below the USB storage is a 4GB *Verbatim Executive Store'n'Go* device :



- A warning dialog box may appear depending of the partitioning already present on the device. In this case confirm the disk selection by pressing **Enter**
- Confirm the installation by pressing **F11**:



- After installation completes (it should take about 5 minutes), remove the installation disc and hit **Enter** to reboot the server:

5.4 Setting up the server to boot on USB device

This section describes how to configure BIOS of **Bull novascale bullion** server to boot on USB storage device.

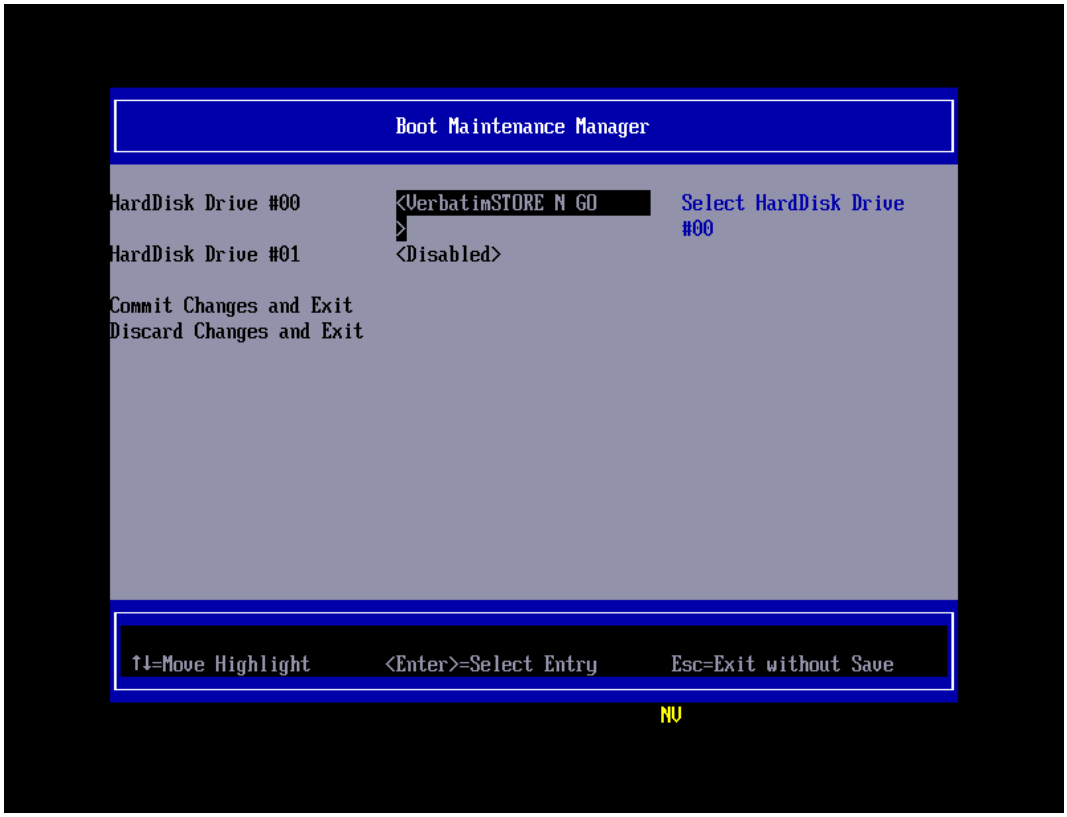
Two steps in the BIOS are necessary to perform this operation :

1. Setting up USB storage device as as first boot device in legacy **Hard Disk Drive Order**
2. Setting up USB storage device as the first item in the boot order list.

5.4.1 Setting up USB storage device as as first boot device in legacy Hard Disk Drive Order

- Enter the BIOS of **novascale bullion** by pressing **Enter** key during reboot when prompted.

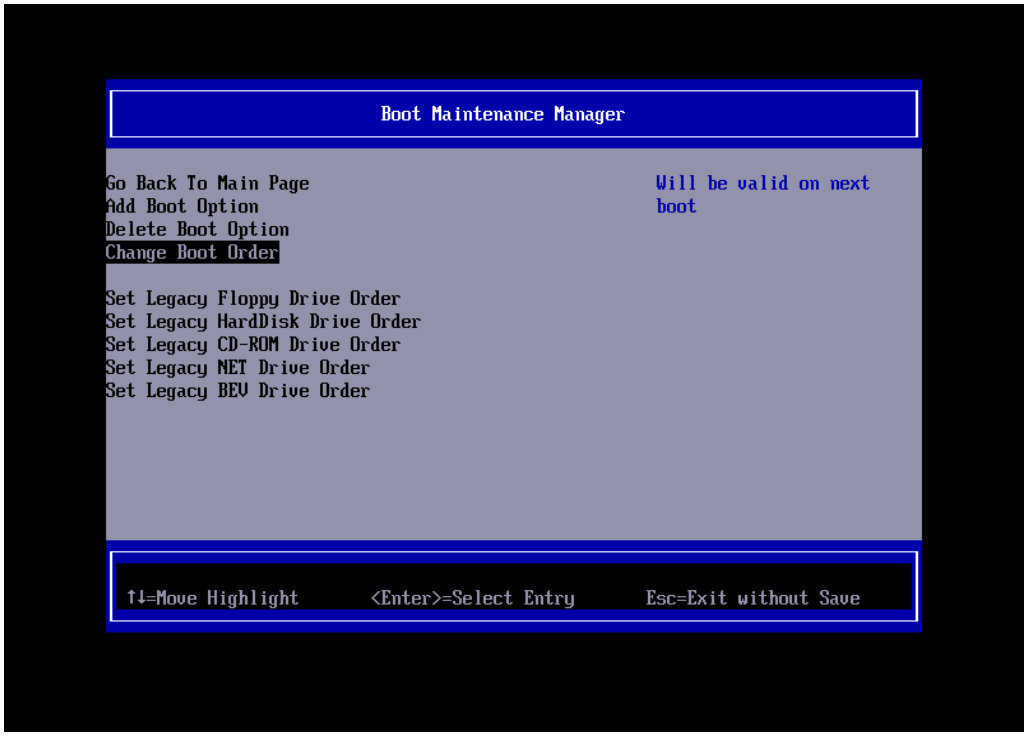
- In the BIOS menu, select the **Boot Maintenance Manager item**.
- In the next screen enter **Boot Options**, then **Set Legacy HardDisk drive Order** menu. Select the USB storage device as **Hard Drive #00** (should be *Verbatim Store'n'go*)

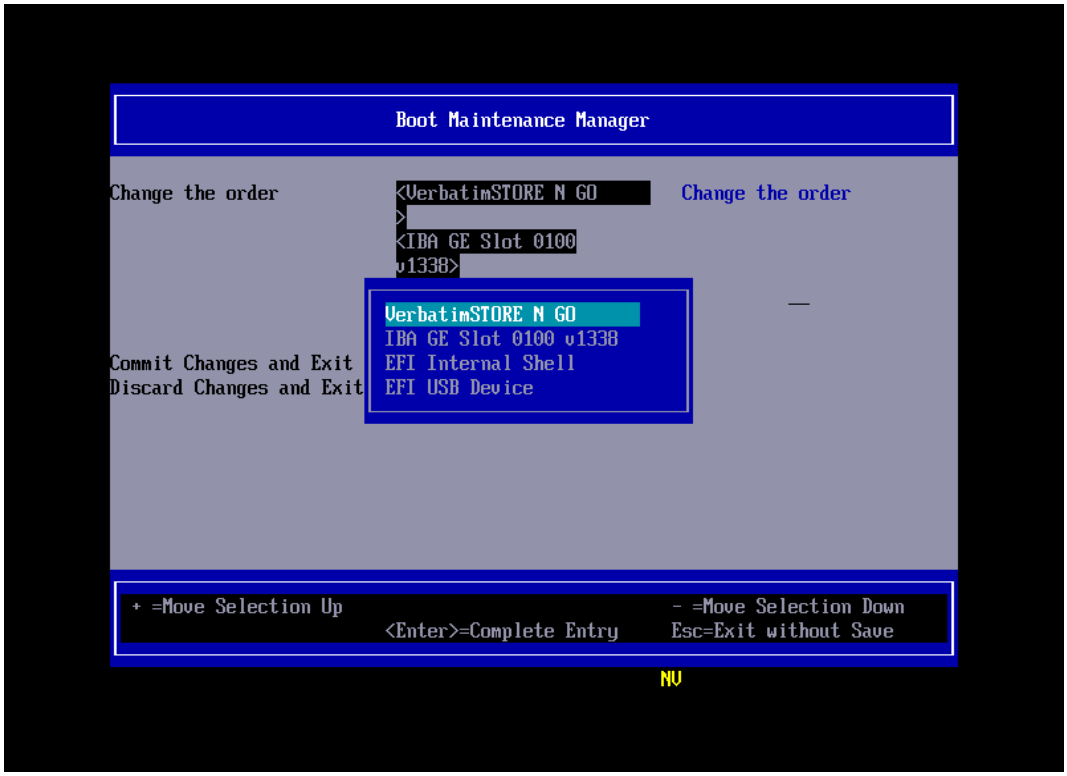


- Exit the previous menu by selecting **Commit changes and Exit** to save your modifications.

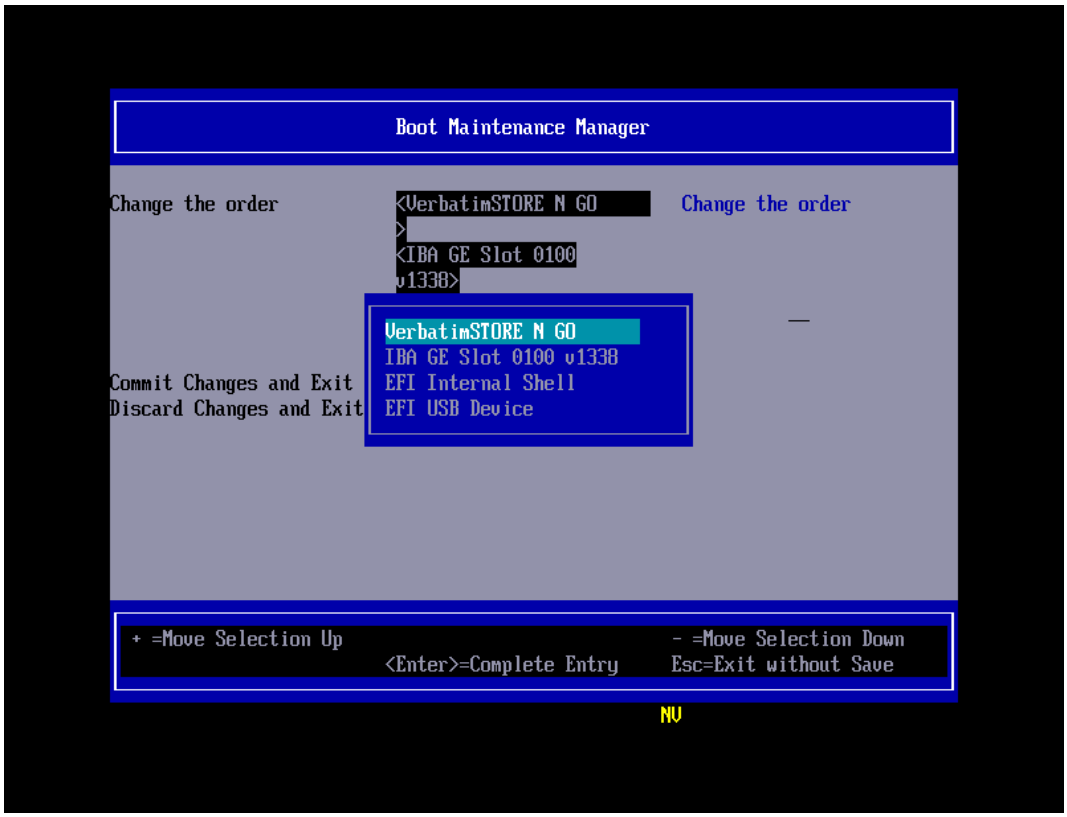
5.4.2 Setting up USB storage device as the first item in the boot order list.

- Once again enter the **Boot Maintenance Manager** menu, then enter **Boot Options** and select **Change Boot Order**:





- Update the boot order by moving *Verbatim Storen'n'Go* device at the top of the list by using the '**+**' key:

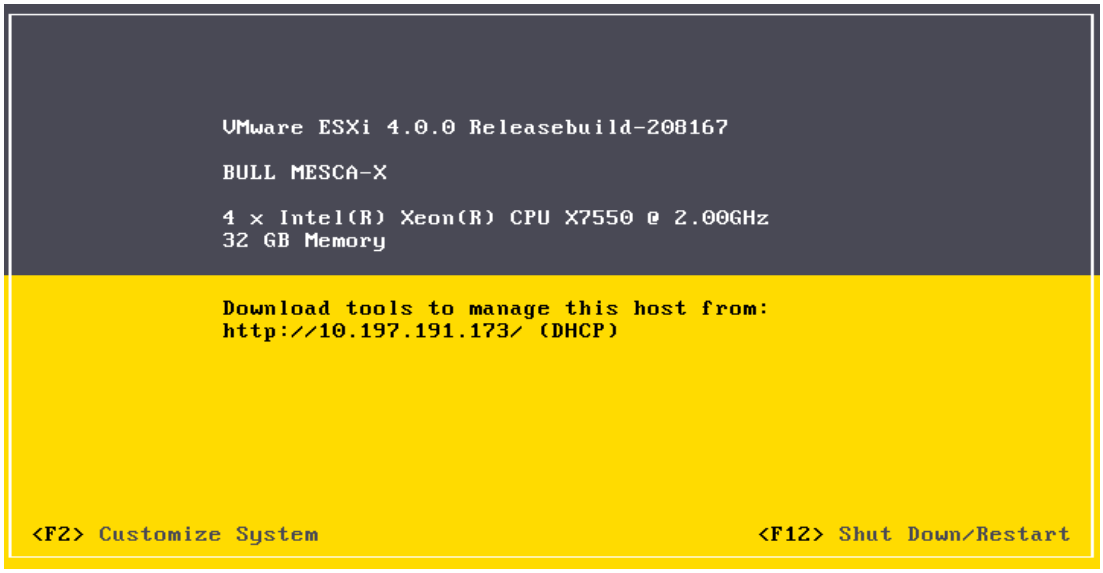


5.5 Configuring VMware ESXi 4

After booting into *VMware ESXi*, last step is to configure it to set up some parameters such askeyboard layout, *root* password, or IP address.

Once VMware ESXi has finished booting, a screen displaying some informations about server configuration is displayed. At this time there is no password configured at all, so settings may be modified by anyone having access to the console.

To enter the System Customization menu, hit **F2** (color of the screen may change from black to yellow):



The first thing to do is to change your keyboard layout if you are not using an English / US layout. Select the **Configure Keyboard** item and choose appropriate layout according to your keyboard.

Then it is highly recommended to set up a new password by selecting **Configure Password** entry. Enter your password twice as required.

Now it could be necessary to configure system's IP address for management, so enter the **Configure Management Network** menu to set up various configuration parameters such as IP address, DNS as so on.